

# ENVIRONMENTAL DECLARATION ISO 14025 and ISO 21930



## Hot rolled steel plates

**EPD**  
Foundation for Environmental  
Declarations in Industry



**NEPD no.:** 064  
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### Independent verification of conformity

We confirm that this environmental declaration has been carried out according to ISO 14044, ISO 14025 and ISO 21930, and Product category rules (PCR) of Steel as construction materials. The documentation has been carried out with the EcoDec-tool.

The declaration has been prepared by:

SINTEF Byggforsk **SINTEF**

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Oslo : 01.04.2007

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Independent verifier

### Industrial body

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### Background information

Scope (Information modules)  
Year of study

Cradle to gate  
2006

Declared unit

kg steel

### Product description

Hot-rolled steel plates used in building frame structures, made by European manufacturers. Dimensions: t= 5-60  
The requirements of the EN 10025 standard are applied. The standard steel grade is S355. Density of steel: 7,850 kg/m<sup>3</sup>.

### Product specification

	Part %	Quantity (kg/FU)
Steel	100,0 %	1,00
SUM	100,0 %	1,00

### Environmental Indicators

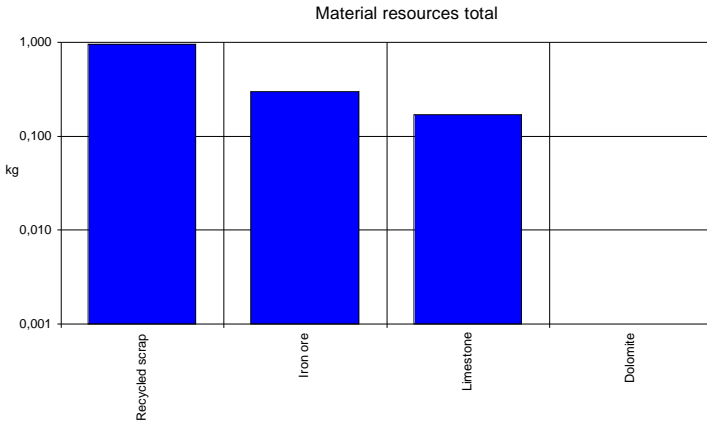
Global warming	1,2	kg CO2 equiv.
Energy use	24,8	MJ
Recycled materials	96	%
Indoor air classification (Classification according to CR 1752:1999)	Not relevant	

The Norwegian Steel Association is the sole owner of this document and takes liability and responsibility for the EPD of the steel products. No other is authorised to use the environmental performance of the steel products without an agreement from the Norwegian Steel Association.

## Use of resources

### Material resources

		Type	Unit	Raw materials	Manufacturing			Transport	Total
R = Recycled materials * = Feedstock									
<b>Non-renewable materials</b>									
Recycled scrap	R	kg	9,6E-01						9,6E-01
Iron ore		kg	3,0E-01						3,0E-01
Limestone		kg	1,7E-01						1,7E-01
Dolomite		kg	3,3E-04						3,3E-04

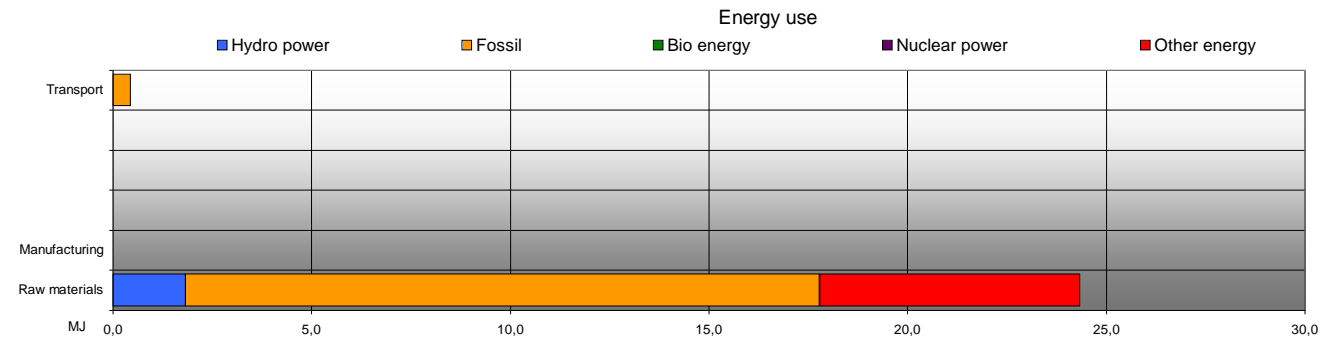


Renewable materials 0 %, Non-renewable materials 100 %, Recycled materials 96 %

The product does not contain tropical wood. No chemicals from the Norwegian observation list are used.

### Energy resources

	Unit	Raw materials	Manufacturing			Transport	Total
<b>Renewable energy</b>							
Hydro power	MJ	1,8E+00					1,8E+00
<b>Non-renewable energy</b>							
Oil	MJ	9,8E-02				4,6E-01	5,5E-01
Gas	MJ	3,7E+00					3,7E+00
Coal	MJ	1,2E+01					1,2E+01
Other energy	MJ	6,6E+00					6,6E+00
<b>Total</b>							<b>2,5E+01</b>



### Water

Potable water 1,2E-02 m<sup>3</sup>

### Land

Land used 0,00 m<sup>2</sup>

## Emissions and environmental impacts

### Environmental impacts

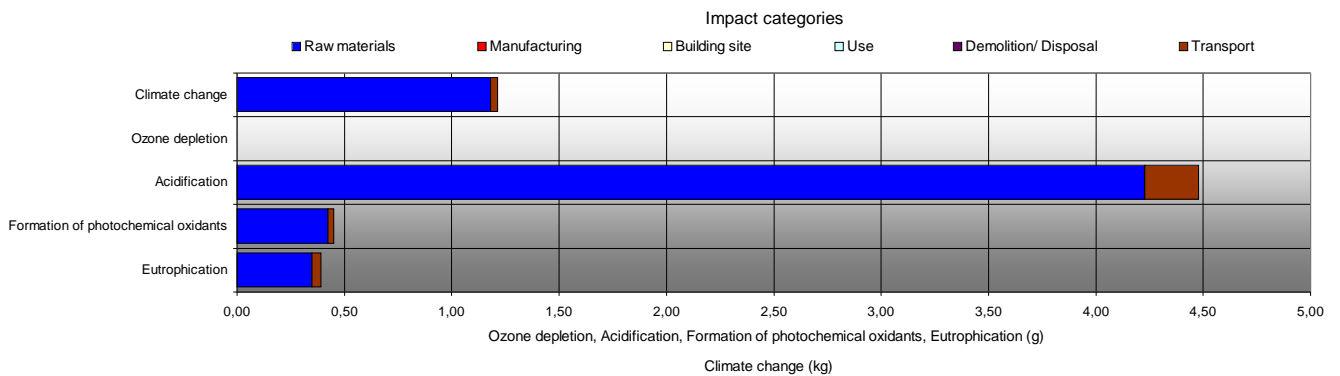
		All figures refer to declared unit						
	Unit	Raw materials	Manufacturing				Transport	Total
Climate change	kg CO <sub>2</sub> - equiv.	1,2E+00					3,39E-02	1,22E+00
Ozone depletion	kg ODP - equiv.							
Acidification	kg SO <sub>2</sub> - equiv.	4,2E-03					2,55E-04	4,48E-03
Formation of photochemical oxidant	kg POCP- equiv.	4,2E-04					3,06E-05	4,54E-04
Eutrophication	kg PO <sub>4</sub> - equiv.	3,5E-04					4,50E-05	3,94E-04

### Emissions to air

	Unit	Raw materials	Manufacturing				Transport	Total
CO <sub>2</sub>	g	1,1E+03					3,3E+01	1,2E+03
CO	g	6,1E+00					1,5E-01	6,3E+00
SO <sub>2</sub>	g	2,5E+00					1,3E-02	2,5E+00
NO <sub>x</sub>	g	2,5E+00					3,5E-01	2,8E+00
NMVOOC	g	1,6E-01					3,9E-02	2,0E-01
Particles	g	1,4E+00					2,6E-02	1,4E+00
CH <sub>4</sub>	g	8,1E-01					1,6E-03	8,1E-01
N <sub>2</sub> O	g	8,6E-02					3,9E-04	8,7E-02
Pb	g	9,5E-04					1,2E-06	9,5E-04
Hg	g	1,7E-04						1,7E-04
HCl	g	4,8E-02						4,8E-02
Benzene	g						7,8E-04	7,8E-04
H <sub>2</sub> S	g	4,1E-02						4,1E-02
Zn	g	1,3E-02						1,3E-02
Cd	g	3,9E-05						3,9E-05

### Emissions to water

COD	g	6,0E-02						6,0E-02
Phosphorus P	g	3,3E-03						3,3E-03
Nitrogen N	g	1,6E-02						1,6E-02
Fe	g	4,8E-02						4,8E-02
Pb	g	4,5E-04						4,5E-04
Cr	g	6,5E-05						6,5E-05



Emissions to indoor environment are not relevant for this product

